

## **REMARKS**

Applicant respectfully requests reconsideration and allowance of the subject application. No claims were canceled nor added. Claims 1-22 are pending, of which Claims 1 and 13 have been amended. The amendments to Claims 1 and 13 are purely of form to correct informalities noted by the Applicant, and are not to overcome prior art or any other objections/rejections.

### **35 U.S.C. § 102 Claim Rejection**

Claims 1 and 19 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,377,117, to Oskowsky et al. (hereinafter, “Oskowsky”). Applicant respectfully traverses the rejection.

### **CLAIMED INVENTION**

The claimed invention is directed to an apparatus and method for effectively amplifying electrical signals. As shown in Fig. 1 of the Application, a second stage power amplifier is connected to an output of a first stage power amplifier. (See, e.g., Fig. 1 and Specification, page 4, lines 10-19). Thus, the first and second stage amplifiers are designed to operate together to efficiently deliver output power with at least two different output power levels. (Specification, page 5, lines 2-8). Each power stage has at least two independent power states for amplifying a signal. (Specification, pages 4 and 5, supra). A state determination circuit selectively configures the two stage amplifiers based on criteria such as output power levels. (Specification, page 4, lines 20-22).

## REFERENCE

The Office cites Oskowsky in the § 102 rejection. Oskowsky describes a multi-stage power amplifier having a plurality of power amplifier stages *arranged in parallel* with associated switches for selectively switching on or off the plurality of power amplifier stages to produce designed power level. (Oskowsky, Abstract). Figure 4 clearly shows inputs for each power stage are received directly from a single common input of the multi-stage power amplifier (Oskowsky, Fig. 4 and col. 3, lines 8-12). The plurality of “*parallel-arranged power amplifier stages*” are independently controlled between an OFF state and an ON state. (Oskowsky, col. 3, lines 8-12).

Accordingly, Oskowsky is directed to switching on and off power stages that are *connected in parallel* to produce ON and OFF states, and provides *no* teaching of connecting power stages together (input to output in serial fashion as opposed to parallel) so that the stages operate together to deliver output power with at least two different output power levels. Additionally, Oskowsky does not remotely disclose using any of the amplifiers to amplify a signal from a previous power stage, because the plurality of “*parallel-arranged power amplifier stages*” are connected in parallel with their input and output terminals in common. (Oskowsky, col. 3, lines 8-12).

## CLAIM-BY-CLAIM ANALYSIS

**Claim 1** recites an amplifier with “a first stage having at least two power states” and a “second stage having at least two power states” with an input from the second stage coupled to the output of the first stage. It also requires “a state

determination circuit for “selectively configuring the one of the at least two power states” of the first and second stages.

Oskowsky does not disclose an amplifier that has an input from a second stage coupled to the output of the first stage (i.e., connected in a serial fashion). Neither does Oskowsky teach how to connect power stages together (again, input to output in serial fashion) so that the stages operate together to deliver output power with at least two different output power levels.

The Office admits that the all the selectable stage amplifiers shown in Oskowsky are *arranged in parallel* with “switches for switching on or off the power amplifiers to produce a desired power level,” but summarily concludes without any support that the Oskowsky anticipates Claim 1. (Office Action, page 2, paragraph 3).

Applicant disagrees. In the Abstract and other locations, Oskowsky actually teaches away from Claim 1, by clearly requiring that each power stage is *connected in parallel* to produce ON and OFF states, and provides *no* teaching of connecting power stages together (input to output in serial fashion) so that the stages operate together to deliver output power with at least two different output power levels. For this reason alone, Oskowsky does not anticipate Claim 1.

**Claim 19** recites a method for “amplifying a signal passing from a source to a load.” Claim 19 requires that first and second stage amplifiers of the amplifier are configured “in one of at least two states based on a determined output power level of an amplifier.” However, the second stage amplifier amplifies the signal “as amplified by the first stage amplifier.”

Oskowsky does not remotely disclose using any of the amplifiers to amplify a signal from a previous power stage, because the plurality of “*parallel-arranged power amplifier stages*” are connected in parallel with their input and output terminals in common. (Oskowsky, col. 3, lines 8-12). Accordingly, Oskowsky fails to teach using a second power stage amplifier to receive a signal from a first stage amplifier such that the first and second stage amplifiers operate together to arrive at the determined output power level. For this reason alone, Oskowsky fails to anticipate Claim 19.

Accordingly, Oskowsky does not anticipate independent Claims 1 and 19.

### **35 U.S.C. § 103 Claim Rejections**

Claims 2-18 and 20-22 are rejected under 35 U.S.C. § 103(a) for obviousness over Oskowsky in view of U.S. Patent No. 6,181,208, to King et al. (hereinafter, “King”) and U.S. Patent No. 6,326,849, to Wang et al. (hereinafter, Wang). Applicant respectfully traverses the rejection.

As described above with reference to the § 102(e) rejection, Oskowsky fails to teach or suggest using a second power stage amplifier to receive a signal from a first stage amplifier such that the first and second stage amplifiers operate together to arrive at the determined output power level. Nor does Oskowsky teach or suggest connecting power stages together (input to output in serial fashion) so that the stages operate together to deliver output power with at least two different output power levels.

King describes employing two separate power devices in an amplifier. One power device is designed for efficiency at a first output power level and is used to

*exclusively* deliver power for a first power output range. (King, Abstract). The other power device is designed for efficiency at a second output power level and is used *exclusively* to deliver power for a second power output range. (King, Abstract). Consequently, the two power devices are designed for efficiency at two different power levels in a mutually exclusive arrangement. Thus, King fails to teach or suggest using first and second stage amplifiers *together* to arrive at more than one output level. Nor does King teach or suggest using a second power stage amplifier to amplify a signal received from a first power stage.

Wang describes an isolation circuit for use in an amplifier bias circuit. The isolation circuit allows DC current to flow into the bias circuit but present an impedance to radio frequency signals. (Wang, col. 1, lines 44-55). The isolation circuit reduces RF leakage and feedback. (Wang, col. 1, lines 55-60). Wang fails to teach or suggest using first and second stage amplifiers to arrive at more than one output level. Nor does Wang teach or suggest using a second power stage amplifier to amplify a signal received from a first power stage.

**Claims 2-12 and 20-22** depend from independent Claims 1 and 19, respectfully, and include all of the limitations therein. Accordingly, Applicant respectfully believes that the primary reference, Oskowsky, cited by the Office as the basis for rejecting dependent Claims 2-12 and 20-22 was not properly interpreted and does not teach or suggest what the Office alleges. For example, Oskowsky fails to teach or suggest using a second power stage amplifier to receive a signal from a first stage amplifier such that the first and second stage amplifiers operate together to arrive at the determined output power level. Nor does Oskowsky teach or suggest connecting power stages together (input to output in

serial fashion) so that the stages operate together to deliver output power with at least two different output power levels.

Because Oskowsky does not teach or suggest what the Office purports it teaches or suggests, it is not possible to combine Oskowsky with King and Wang to arrive at Claims 2-12 and 20-22. Moreover, none of the references cited in the Office Action teach, suggest or provide any motivation to arrive at the solutions claimed by the Applicant. In some instances, as described above with respect to Oskowsky, the references actually teach away from Applicant's claimed invention. Accordingly, Applicant respectfully requests the section 103 rejection of dependent Claims **2-12 and 20-22** be withdrawn, because the Office has failed to establish a *prima facie* case of obviousness with respect to them.

Independent **Claim 13** defines a wireless device that includes an amplifier. The amplifier includes "a first stage having at least two power states" and a "second stage having at least two power states" with an input from the second stage coupled to the output of the first stage. An output circuit has at least two impedance matching states with its input connected to the output of the second stage. A state determination circuit is used to "selectively configuring said output circuit in one of the at least two impedance matching states."

The cited references do not teach or suggest the aforementioned wireless device as recited in independent Claim 13. For example, Oskowsky teaches away from Applicant's Claim 13 by using power stages in parallel. Oskowsky fails to teach or suggest using a second power stage amplifier to receive a signal from a first stage amplifier such that the first and second stage amplifiers operate together to arrive at the determined output power level. Nor does Oskowsky teach or

suggest connecting power stages together (input to output in serial fashion) so that the stages operate together to deliver output power with at least two different output power levels.

As for King and Wang, neither appears to have much relevance to Claim 13. Neither reference teaches or suggests using first and second stage amplifiers to arrive at more than one output level nor using a second power stage amplifier to amplify a signal received from a first power stage.

The Office argues that Oskowsky teaches everything recited in Claim 13 except the output circuit. (Office Action, page 4, last paragraph). Applicant disagrees.

Again, Oskowsky fails to teach or suggest using a second power stage amplifier to receive a signal from a first stage amplifier such that the first and second stage amplifiers operate together to arrive at the determined output power level. Nor does Oskowsky teach or suggest connecting power stages together (input to output in serial fashion) so that the stages operate together to deliver output power with at least two different output power levels. Accordingly, Applicant respectfully believes that the primary reference, Oskowsky, cited by the Office as the basis for rejecting independent Claim 13 was not properly interpreted and does not teach or suggest what the Office alleges with respect to independent Claim 13 as described above.

Because Oskowsky does not teach or suggest what the Office purports it teaches or suggests, it is not possible to combine Oskowsky with King and Wang to arrive at Claim 13. Accordingly, none of the references cited in the Office Action teach, suggest or provide any motivation to arrive at the solutions claimed

by the Applicant. Therefore, based on all of the above comments, the Office has failed to establish a *prima facie* case of obviousness with respect to independent Claim 13 and any claims dependent thereon (**Claims 14-18**). For these reasons alone, Applicant respectfully requests that the § 103 rejection of Claims 13-18 be withdrawn.

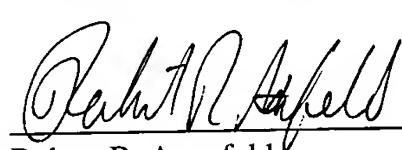
**Conclusion**

Pending Claims 1-22 are in condition for allowance. Applicant respectfully requests reconsideration and issuance of the subject application. If any issues remain that preclude issuance of this application, the Examiner is urged to contact the undersigned attorney before issuing a subsequent Action.

Respectfully Submitted,

Dated: 3-25-03

By:



Robert R. Axenfeld  
Reg. No. 37,276  
(215) 923-4466

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date: March 25, 2003

Typed or printed	Dorothy M. Musgrevae	
Signature	Dorothy M. Musgrevae	Date <u>3/25/2003</u>